

Amendments to the Claims:

Claim 1. (cancelled)

2. (currently amended) ~~The system of claim 1, wherein said embroidery data generating mechanism comprises:~~ A system for automatically producing an embroidery design, the system comprising:

a) means for inputting an embroidery pattern into an image data file, the image data file comprising a plurality of pixels, each pixel comprising a bitmap representing a color;

b) processing means operatively connected to said inputting means for creating skeletal and edge contour data and storing said image data file; and

c) an embroidery data generating mechanism operatively connected to said processing means for labeling and interrelating said skeletal and edge contour data and generating a complex embroidery pattern directly from a scanned, color image, wherein said embroidery data generating mechanism comprises:

i) segmenting means for characterizing each pixel within the image data file into an object;

ii) means for classifying each of said objects as a thin object or a thick object;

iii) means for locating and interpreting a set of regular and singular regions for embroidery data point ~~generation-generation;~~

iv) path generation means for computing an optimum sew order for at least one extracted column; and

v) embroidery output means for generating an embroidery output file.

Claims 3-19. (cancelled)

20. (original) A method for automatically producing an embroidery design, the system comprising:

- a) inputting an embroidery pattern into an image data file, the image data file comprising a plurality of pixels, each pixel comprising a bitmap representing a color;
- b) locating a set of regular and singular regions disposed in said image data file;
- c) interpreting said set of regular and singular regions;
- d) computing an optimum sew order; and
- e) generating an image output file dependent on said interpreted set of regular and singular regions.